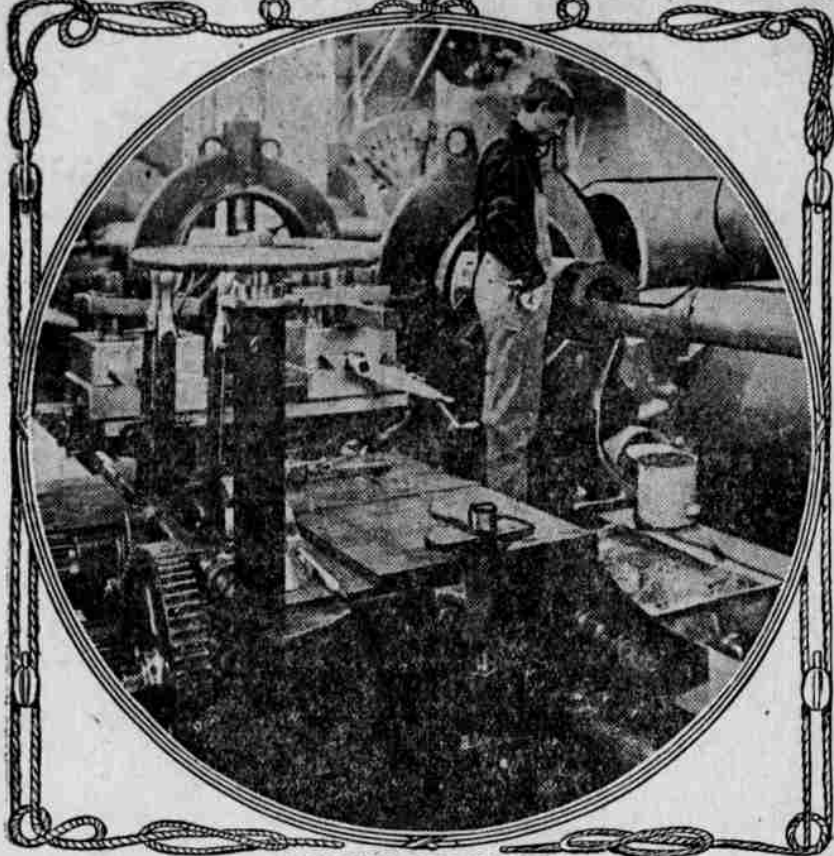


GREAT GUNS FOR THE NAVY



BORING BIG GUNS

TWENTY fourteen-inch guns, the largest naval guns in the world, are being constructed at the Washington navy yard for the New York and the Texas; first-class battleships of the dreadnought type, which are expected to be ready for launching about a year hence. Later on twenty or more of the great bores are to be built for the Nevada and the Oklahoma dreadnoughts to be completed in 1914, and the United States will then have four war ships armed with larger guns than any other navy possesses, each of the four battleships capable of hurling seven tons of projectile a distance of thirteen miles with each discharge of its batteries, writes Arthur M. Evans in the Chicago Record-Herald.

Two or three larger guns, fifteen and sixteen inch bores, it is true, have been built by other naval powers, but they have either been smoothbore or have had faults in mechanism that have made them unsuccessful of operation, and they are not listed in the battleship armament of the great powers.

The fourteen-inch monsters in the shops at the navy yard are rivals of the Washington monument, the capitol, the White House and the congressional library in attracting the interest of visitors in Washington, and a continuous procession of sightseers streams through the factory to watch the manufacturer of the giant roars. The navy yard is an ordnance factory, and its machine shop is one of the wonders of Washington. Up to two years ago the thirteen-inch gun was the largest manufactured, but since then the fourteen-inch monster has been the pet product of the plant, a great black bore, fifty feet long, that stretches almost to the width of the shop when it is in the lathe and that weighs more than sixty-three tons without its mount.

What They Cost.

The guns are forged at Bethlehem, Pa., and are finished here. They are made in sections, with successive jackets and hoops shrunk upon the central tube, just as a blacksmith shrinks a tire upon a wagon wheel. The jacket is heated in an electric furnace that produces a temperature of 400 to 500 degrees, the core is inserted and the jacket is then cooled off, shrinking until it encases the tube almost as closely as if both were one piece of metal. The gun made up of layers of steel in this way is much stronger than one formed of one piece of metal.

Traveling cranes pick up the gun as

if it were a toothpick, and place it in the barrel-boring lathe, where powerful machines bore out the barrel and chamber, after which the rifling lathe cuts grooves on the inside of the bore to give the projectile a rotary movement. In the lathe the immense gun itself is rotated upon the cutting instruments.

By the time the fourteen-inch gun is finished it has cost \$62,208. The mount costs \$50,000 more. The life of the gun before lining is necessary is 225 rounds, and the cost of each round of ammunition in warfare is somewhat in excess of \$600, of which the projectile itself costs \$500. In target practice the cost of each shot is about \$200. The fourteen-inch gun throws a shell weighing 1,400 pounds a distance of nearly thirteen miles with such accuracy that the expert gunners can land the projectile somewhere within a rectangle with twenty-foot sides. The shell leaves the muzzle of the gun traveling at a velocity of nearly half a mile a second and at a distance of 10,000 yards it is capable of penetrating 15.9 inches of face-hardened armor. The twelve-inch guns penetrate 15.6 inches of similar armor at the same distance.

In the yard is a display of trophies that illustrates vividly the great progress made in the machinery of warfare. The Cornwallis battery, captured at Yorktown, is arranged in a circle on a concrete stand. Compared with the immense fourteen-inch guns in the shop, with their length of fifty-five feet and their weight of sixty-three tons, the cannon of Cornwallis look almost like watch charms. Each is about the size of a length of drain tile. Some of them have handles on their tops like satchels. They look as if they might be carried in shawl straps.

It requires about eighteen months to construct one of the fourteen-inch guns, and already six have been completed and taken out to the naval proving ground at Indian Head, where they are tested. The rest of the twenty guns are in various stages of making, but all are expected to be ready when the New York and Texas are launched next year.

Although the fourteen-inch beauties are the greatest attraction to visitors just now, the other naval armament in the shops is of tremendous interest. Twelve-inch giants weighing fifty-six tons stick out from the lathes. They cost even more than the fourteen-inch guns to make, \$65,000 being the amount each gun costs without its mount, which costs \$52,000 additional. They have a longer range than the

larger sized guns, but their life is shorter, lining being necessary after 200 rounds have been fired. It costs \$424 each time one of these is fired with a war charge and projectile.

Horsepower Figured.

In the shell shops workmen may be seen transforming blocks of brass into tubes, an interesting process, while in a vast tank in another building models of war vessels are being tested. This workshop is next to the gun factory in interest. Wooden models, as large as a canoe or rowboat, of every vessel ordered for the navy are made by the shipbuilders. The proportions are exactly the same as those of the projected ships of war. Above the long tank travels an appliance not unlike a crane. When the test is made the model is weighted in proportion to the weight of the actual boat in order to determine the displacement. The model is connected with the traveling overhead device, which drives it through the water at varying degrees of speed. A machine records the resistance, and from this is figured the horse power required to drive the actual vessel at a given rate of speed.

The completion of the Texas and the New York next year and of the Nevada and Oklahoma in 1914 will give the United States thirty-seven first-class battleships with a tonnage of 610,796. When Germany finishes the nine dreadnoughts that are to be completed at the rate of three a year before the close of 1914, it will have thirty-six battleships with a tonnage of 580,870. Great Britain, which is building ten new dreadnoughts, two to be finished this year, four next year and four in 1914, will have a total of seventy battleships, tonnage 1,189,000. In battleships the United States will rank second, but in armored cruisers it will have twelve, as against Germany's fourteen and Great Britain's forty-four by the end of 1914. The tonnage of the battleships and armored cruisers built, building and provided for according to the latest navy year book, is: Great Britain, 1,809,650; United States, 768,241; Germany, 787,638; France, 626,726; Japan, 421,845; Russia, 287,016; Italy, 299,707, and Austria-Hungary, 171,188.

In number and displacement of all war ships, built and building, of 1,000 or more tons and of torpedo craft of more than fifty tons, Great Britain has 560 vessels of 2,324,579 tonnage; Germany, 268 vessels and 1,087,399 tonnage, and the United States, 197 vessels, tonnage 885,066.

As to large guns, the United States navy will have forty fourteen-inch, thirty-two thirteen-inch and 148 twelve-inch guns, a total of 220; Germany will have 176 twelve-inch and ninety-six eleven-inch guns, a total of 272, and Great Britain will have 300 twelve-inch and 184 thirteen-inch guns, an aggregate of 484.

Cheerfully Informed.

A young student of science of Indianapolis came to a professor recently with this entry in his note book: "Memo: Inquire further concerning walnut catsup and the raw material for its manufacture."

And the events of the entry were these: The student had gone to the country southeast of the city in an inquisitive spirit, seeking items of information of all kinds, and had seen a sugar camp, where a countryman with a brace and bit was diligently boring a tree. It chanced to be a walnut tree.

"Might I ask," queried the student with much curiosity, "might I ask what it is you get from this tree?" The countryman looked up at the tree, noted his mistake and cocked his eye knowingly.

"Sure—walnut ketchup!" he responded cheerfully, and passed on to the next tree.

Apropos Inquiry.

Fond Daughter—Pa, I saw in the paper where you got a number of sealed proposals at your office.

Official Father—Yes, dear. Fond Daughter—Pa, were any of them proposals for me?

Which goes to show that there are a couple of ways of speaking the grand old language.

672 Sure Cures.

"De Courcoy," asked a caller, "do you know of anything that's good for a cold?" Our old friend De Courcoy Van Guy aroused himself from his lethargy and spoke as follows:

"Do I know anything that's good for a cold?" he echoed. "My young friend, I know of 672 infallible ways of curing a cold. Here is a bundle of papers from the lower drawer of my desk. I have been collecting them for more than 30 years—I came to this town in the summer of 1879. You just try these, one after another, and if they don't do you any good, come back and I'll give you 114 more which I have in the next pigeon-hole. You young fellows don't seem to have any sense—you can always cure a cold if you go at it right."—Cleveland Plain Dealer.

The mere fact that you are having a good time while you are young won't necessarily keep you out of the county infirmary when you get old.

NEWS for the YOUNG PEOPLE

AMPLE MEAL FOR A PYTHON

Full-Sized Goat Is Swallowed in Two Efforts, Time Occupying Space of About 15 Minutes.

Probably the finest zoological specimens of Borneo creatures ever brought together in Sandakan are now to be seen at the hotel, says the British North Borneo Herald. They consist of a magnificent specimen of the tiger, four orang-utans, all thoroughly



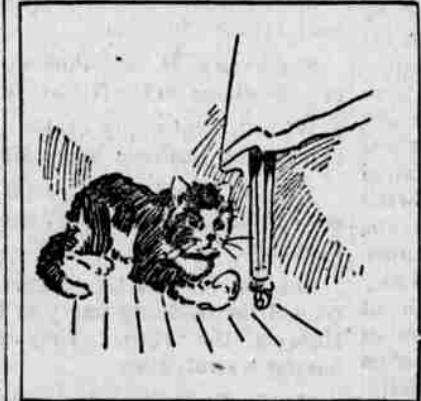
A Bulge in His Middle.

docile and healthy, and last but not least, a 28-foot python. This latter had not required food for some months and showed signs of wanting something to eat the other day. In consequence a full-sized goat was introduced. After the goat had tried an ineffectual "butt" the python caught him by the muzzle, and in one moment had enveloped him in his coils, killing him instantly. The python then proceeded to swallow him whole, which occupied, in two efforts, about a quarter of an hour. When we saw the python a few hours after his orgy, there was a sort of leery smile on his face and a bulge in his middle which must have measured over four feet round. The animals are the property of Dr. Herze, who is taking them home to Europe.

CAT HAS FONDNESS FOR EGGS

Big, Fat, Lazy Fellow Detected in Act of Tearing Open Bag and Stealing Hen Fruit.

The owner of a clever cat writes to Our Dumb Animals that the pet, "a great, fat, lazy, good natured fellow," has a fondness for eggs. Sir Tom was detected in the kitchen recently on a table watching an unopened bag of



This Cat Likes Eggs.

eggs. "Stepping back noiselessly," writes the owner, "we saw him cautiously tear the bag with his teeth and claws, stopping every little bit to listen. Finally the opening was large enough for him to get out an egg by gentle little pats. He held the egg in his mouth, jumped to the floor, rolled his prize about gently until he got it into position, and then bumped it against the table leg until it broke. Then he enjoyed his feast." The writer wonders where Tom got the taste, as he and "his ancestors for generations back were city bred."

Question in Fractions.

"Now, boys, I have a few questions in fractions to ask," said the teacher. "Suppose I have a piece of beefsteak and cut it into sixteen pieces, what would those pieces be called?" "Sixteenths," announced one boy, after meditating a moment. "Good. And when the sixteenths were cut in half, what would they be?" There was some silence in the class, but presently a little boy at the foot put up his hand. "Do you know Johnnie?" "Hash," answered Johnnie, confidently.

Brinkler Was Nice.

"Mr. Brinkler is an awfully nice man, mamma." "Is he?" "Yes. Out on the porch last night he said to sister Lou: 'Aren't you cold?' and then he wrapped the sleeve of his coat around her. Wasn't that thoughtful? And his arm was in it, too."

Study of Percentage.

Jimmie—"Wot's de use of studyin' percentage?" Tommy—"Youse don't know nuttin'. W'y they uses it in 'figgerin' he standin' of de baseball clubs."

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THE POULTRY REMEDY.
Mr. Stephen Holbrook, Sec'y Tacoma (Wash.) Poultry Ass'n writes: "I will give Mexican Mustang Liniment an unequivocal endorsement as a remedy for Bumblefoot and Canker in the Throat. Hitherto I have found these diseases of my poultry very difficult to cure but Mustang Liniment proved to be a positive remedy." 25c. 50c. \$1 a bottle at Drug & Gen'l Stores

Would Encourage Marriage.

Citizens from Aculco, state of Mexico, have come to this city, says the Mexican Herald, to complain against the action of the parish priest who recommends that all men of marriageable age should marry because if they do not they are liable to be enlisted by means of a lottery and made to serve in the army.

Stimulant or Tonic?

Ayer's Sarsaparilla is not a stimulant. It does not make you feel better one day, then as bad as ever the next. There is not a drop of alcohol in it. Ayer's Sarsaparilla is a tonic. You have the steady, even gain that comes from such a medicine. Ask your doctor all about this. Trust him fully, and always do as he says. He knows.

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Woman Doctors in Siberia.

A number of influential Siberians are petitioning the Ministry of Education in St. Petersburg to allow women to be admitted to the medical faculty in the University of Tobolsk. The petitioners point out that there is a wide field for women doctors in Siberia, where it is often difficult for settlers to get medical aid.

There are many Mohammedans in the country, and it is explained that only women doctors can come to their help in illness, as they do not permit men to see their wives and daughters. Many women have entered the medical profession in Russia proper, and there are a great many women practicing dentistry, a department of surgery which does not seem to have attractions for the English woman.

The Child's Confidence.

Whether it is the mother or the father who takes especial charge of the boy, or both, they should aim steadfastly to have his complete confidence always. He should be made to feel that they are not only dearer to him but nearer to him than any one else in the world. If a condition of im-

plicit confidence can be established you can depend upon him to be receptive. Then, with truth as his anchor, no storm of the outer world can sweep him beyond the influence of home. The bulwark of the good character that you have bullded will stand.

English Among the English.

It was the same genial British officer aboard his majesty's sloop of war Algerine who inquired what "far-hm" the boat was from.

The cutter had just returned to the bay from the west coast of Mexico and the critical situation in the tumultuous lower republic was being discussed.

"Most extraordinary condition there," observed the Britisher. "Communication demoralized and annoying difficulty in getting the mail through, don't you know, eh?"

There was a tense pause and then: "Beg pardon, what is that mile you speak of?" Inquired the one with whom the British "jolly" was conversing, and his question was both innocent and sincere.

"The mail, the posts, old chap!"